

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 13-19, 23, 24, and 27-35¹ are pending in the application, with claims 13, 23, and 33 being the independent claims. Claims 13 and 33 are sought to be amended. Claims 20-22 and 25-26 were previously canceled. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Telephone Interview Summary

Applicants' representatives thank Examiner Kim for his time on a telephonic interview conducted on December 9, 2008 at 11:30 A.M. During the telephonic interview, claim 13 and the cited reference Ottens were discussed. The Examiner noted that he would further examine the current application in view of the discussion.

Rejections under 35 U.S.C. § 103

Claims 13-16, 19, 23, 24 and 27-35 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ottens *et al.* (U.S. Patent Application Pub. No. 2007/0257209, hereinafter "Ottens"). Applicants respectfully traverse this rejection.

Claim 13

¹ Although the Office Action Summary page states claim 37, Applicants note there is no claim 37.

Claim 13 recites features that distinguish over the cited reference. For example, claim 13 recites (emphasis added):

concurrently adjusting, in real time, one or more spatial characteristics of the patterned beam relative to a substrate support to compensate for the calculated dimensional response, wherein the spatial characteristics comprise a cross-sectional shape of the patterned beam, a position of the patterned beam, and a size of the patterned beam.

The Examiner alleges that Ottens, in paragraphs [0116]-[0133], teaches or suggests at least these features of claim 13. Applicants respectfully disagree with the Examiner.

In the cited portions, Ottens appears to rely on a pre-stored deformation map for compensating for predicted deformations. (See, Ottens at paragraph [0126]). Thus, it appears in this portion of Ottens, Ottens has already performed a calculation for deformation of the substrate, which is used during subsequent exposure of the substrate. Accordingly, Applicants request the Examiner reconsider and withdraw the rejection, and pass claims 13-16 and 19 to issue.

Claims 23 and 33

Claim 23 recites features that distinguish over the cited reference. For example, claim 23 recites (emphasis added):

forming a first pattern of alignment features at the first different respective regions of the substrate having the measured first set of temperatures during an exposure of the substrate;

...
 forming a second pattern of alignment features at the second different respective regions of the substrate having the measured second set of temperatures during a subsequent exposure of the substrate;

Similarly, using respective language, claim 33 recites (emphasis added):

a patterning system to form a first and a second pattern of alignment features at the first different respective regions of the substrate having the measured first set

of temperatures during an exposure of the substrate and at the second different respective regions of the substrate having the measured second set of temperatures during a subsequent exposure of the substrate;

It does not appear that in the cited portions Ottens teaches or suggests the above-noted features of claims 23 and 33. In the example, the pre-formed alignment marks P1 and P2, disclosed in this portion Ottens, appear to align the whole substrate W, and do not appear to be formed based on the temperature measurement during an exposure of the substrate, as recited, using respective language, in claims 23 and 33.

Accordingly, Applicants respectfully request that this rejection be reconsidered and withdrawn, and that claims 23 and 33, and their respective dependent claims, be passed to allowance.

Claims 17 and 18

Claims 17 and 18 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ottens in view of Feder *et al.* (U.S. Patent Application Pub. No. 2004/0012404, hereinafter "Feder"). Applicants respectfully traverse this rejection.

Claims 17 and 18 depend from claim 13 and include all features thereof, in addition to their own distinguishing features. Feder is being used to disclose, which Applicants do not acquiesce to, a temperature sensor located above the substrate. However, Feder is not being used to disclose the features of claim 13, which are missing from Ottens, as argued above. Therefore, Ottens and Feder, taken alone or in combination, do not disclose each and every feature of claim 13, and thus cannot be used to form a *prima facia* case of obviousness.

Accordingly, Applicants respectfully request that this rejection be reconsidered and withdrawn, and that claims 17 and 18 be passed to allowance at least for the same reasons as claim 13, and further in view of their own distinguishing features.

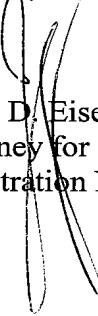
Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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